CFS-55L

AEP Model
UK Model

FM/MW/LW/SW
STEREO CASSETTE-CORDER

SPECIFICATIONS

GENERAL

Power Requirements: 220 V ac, 50 Hz (AEP model)
240 V ac, 50 Hz (UK model)
9 V dc, six batteries size D (IEC designation R20)

Power Consumption: 16 W ac

Power Output: 2 W x 2 (at 10% harmonic distortion) at dc operation

Dimensions: Approx. 413 (w) x 252 (h) x 120 (d) mm
16 1/4 (w) x 9 3/8 (h) x 4 3/4 (d) inches
incl. projecting parts and controls
not incl. handle

Weight: Approx. 4.3 kg, 9 lb 8 oz
incl. batteries

RADIO SECTION

Frequency Range: FM: 87.5–108 MHz
SW: 6.0–18.0 MHz (50–16.7 m)
MW: 530–1,605 kHz (566–187 m)
LW: 150–350 kHz (2,000–857 m)

Antennas: FM/SW: Telescopic antenna
MW/LW: Built-in ferrite-rod antenna

– Continued on page 2 –

Tape Transport Mechanism Type	MDS-10VS3	
	Specifications	**Test Equipment**
Forward Torque	24–50 g·cm (0.33–0.69 oz·inch)	Sony torque meter CQ-102A
Fast Forward and Rewind Torque	60–110 g·cm (0.83–1.52 oz·inch)	Sony torque meter CQ-201A
Tape Tension	more than 150 g (more than 5.3 oz)	Sony tape tension meter CQ-403

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SONY®

SERVICE MANUAL

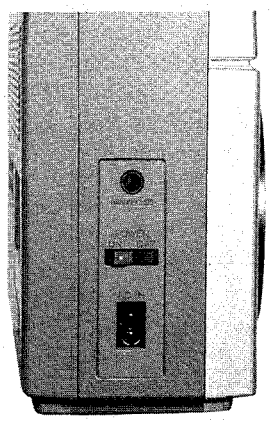
TAPE RECORDER SECTION

Track:	4-track 2-channel stereo or monaural
Fast Winding Time:	Approx. 1 min. 30 sec. with Sony Cassette C-60
Frequency Response:	80—7,000 Hz (UK model) 80—8,000 Hz (AEP model)
S/N Ratio:	40 dB
Total Harmonic Distortion:	3%
Wow and Flutter:	0.15% (WRMS)
Battery Life:	Approx. 8 hours of continuous recording with the Built-in Microphones using Sony Super Batteries SUM-1S
Speakers:	Two approx. 10 cm (4 inches) dia.
Outputs:	HEADPHONES (stereo binaural jack) Impedance: for 8Ω impedance headphones EXT SP (two minijacks) Impedance: for 4Ω or 8Ω impedance speakers

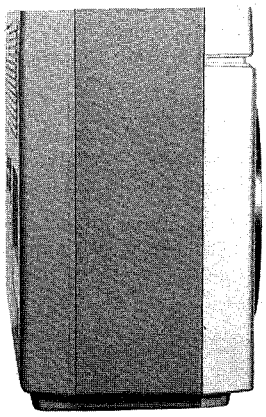
0 dB = 0.775 V

MODEL IDENTIFICATION

— UK model —



— AEP model —

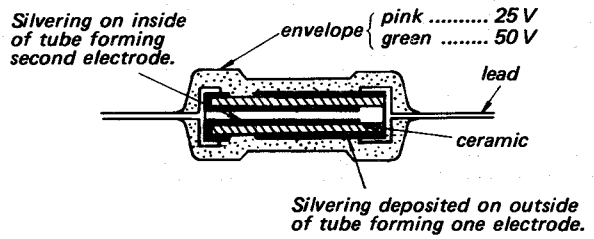


THE CERAMIC CAPACITORS

This set uses tube-type ceramic capacitors whose shape is identical with the carbon resistors. Be careful not to use resistors instead of capacitors in repairing.

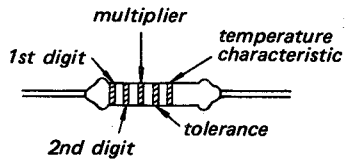
Disc-type ceramic capacitors can be used for replacing those originally used in the set.

Two kinds of drilled holes are provided in some patterns for mounting the tube-type and disc-type ceramic capacitors. Use appropriate holes where applicable.

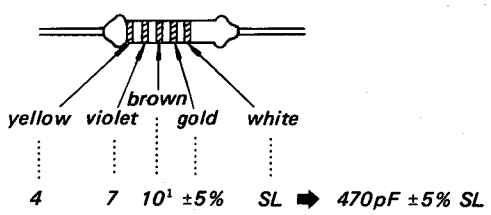

Silvering on inside of tube forming second electrode.
envelope
pink ..... 25 V
green ..... 50 V
lead
ceramic
Silvering deposited on outside of tube forming one electrode.

COLOR CODE (in pF)

Color	1st or 2nd Digit	Multiplier	Tolerance	Temperature characteristic
brown	1	10^1		Y
red	2	10^2		D
orange	3	10^3		
yellow	4	10^4		RH
green	5			
blue	6			
violet	7			UJ
gray	8		±30%	X
white	9			SL
black	0	10^0	±20%	CH
gold		10^{-1}	± 5%	V
silver		10^{-2}	±10%	B

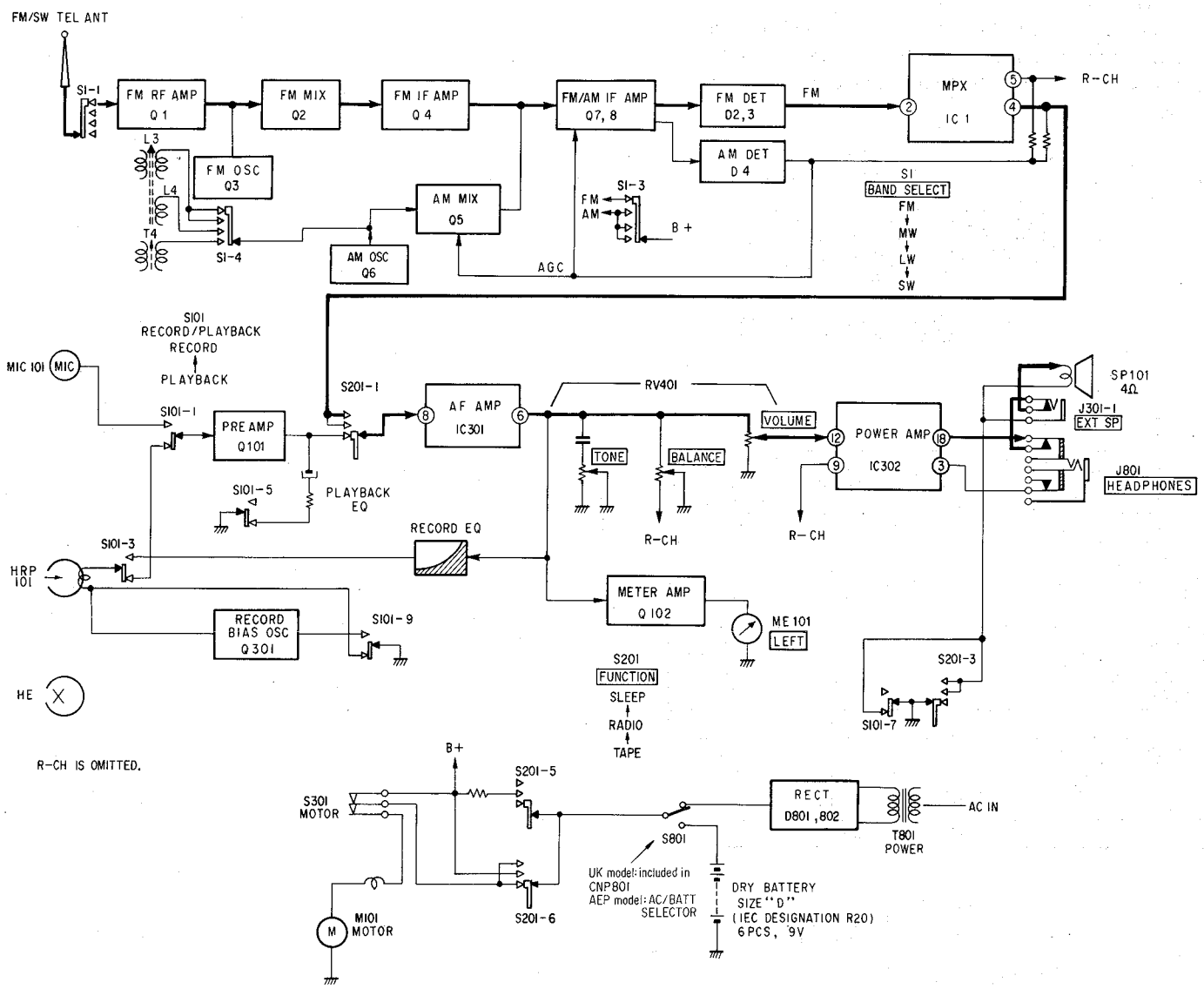


Example:



SECTION 1
BLOCK DIAGRAM

1-1. BLOCK DIAGRAM

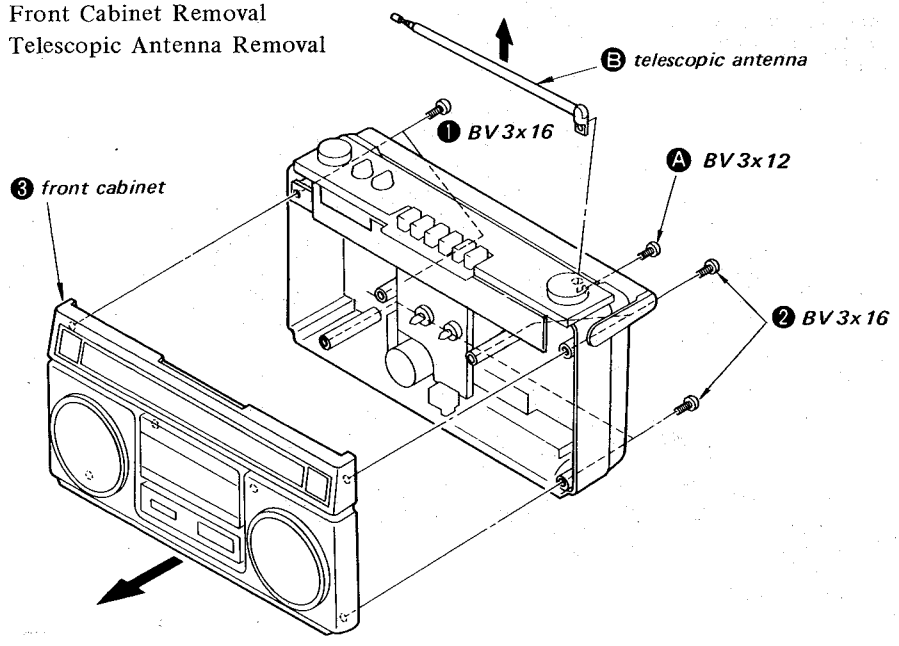


SECTION 2
DISASSEMBLY

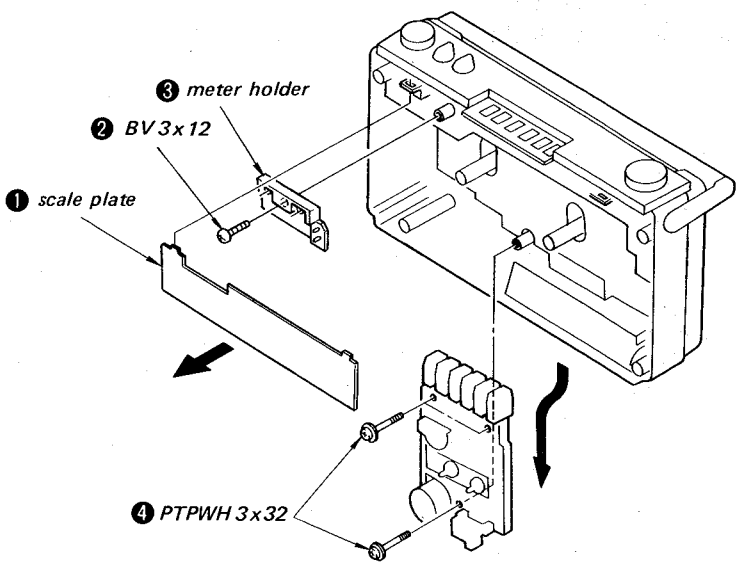
Note: Follow the disassembly procedure in the numerical order given.

2-1. FRONT CABINET AND TELESCOPIC ANTENNA REMOVAL

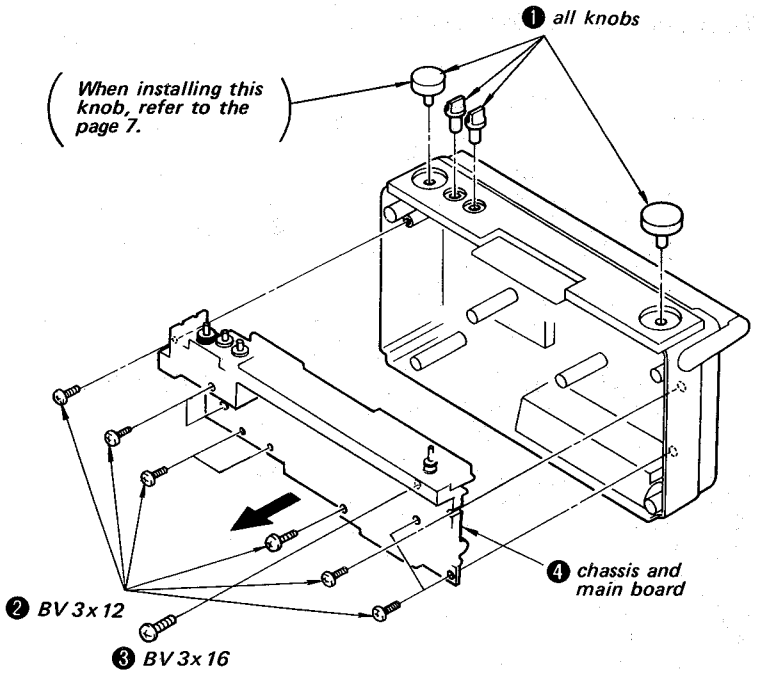
❶, ❷, ❸: Front Cabinet Removal
Ⓐ, Ⓑ : Telescopic Antenna Removal



2-2. MECHANISM REMOVAL

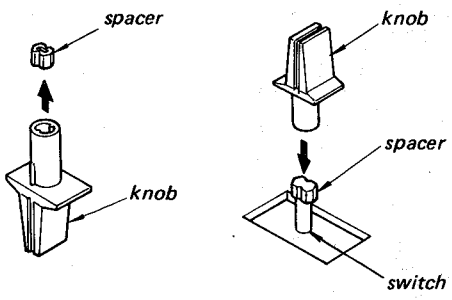


2-3. CHASSIS AND MAIN BOARD REMOVAL



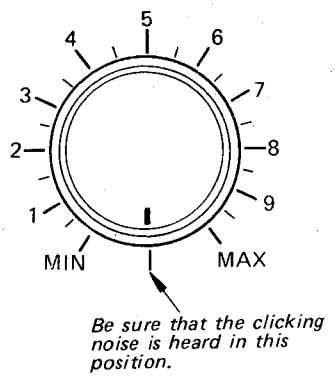
2-4. NOTE ON KNOB INSTALLATION

When removing the knobs, they will come off with the spacers. For adequate knob installation, once pull the spacer out from the knob, replace the spacer into the switch first, and then reinstall the knob.



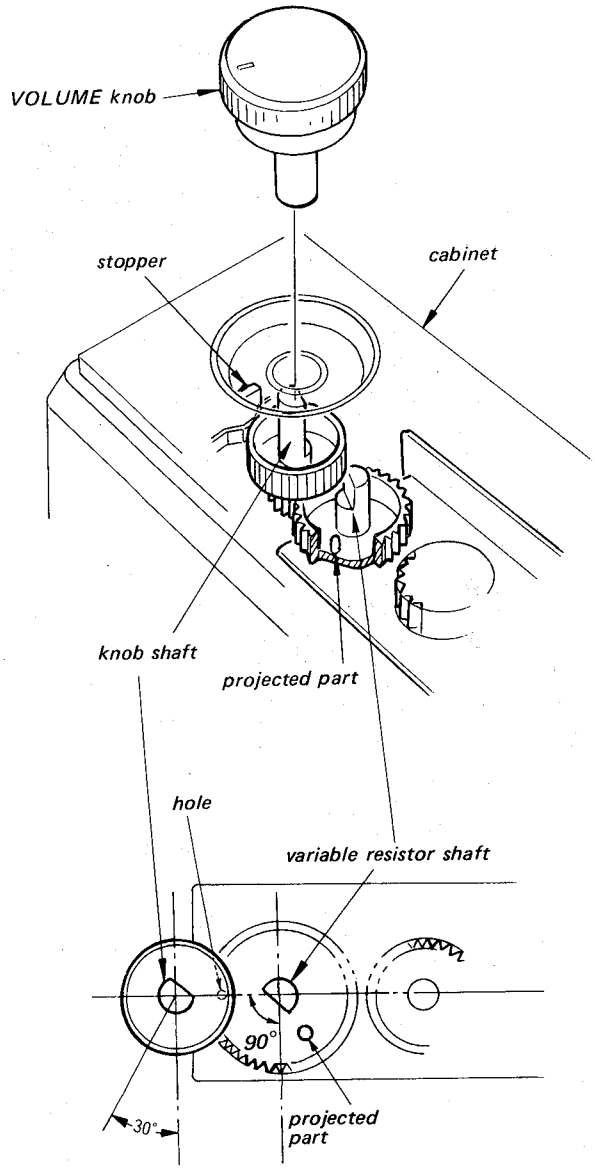
2-5. VOLUME KNOB INSTALLATION

1. After placing the set into the cabinet, insert the VOLUME knob slightly into the knob shaft. The VOLUME knob can be turned 360° in this condition.
2. Set the FUNCTION switch to RADIO. Turn the VOLUME knob counterclockwise, then a clocking noise can be heard after the sound becomes small. The position where the clicking noise can be heard differs every time the VOLUME knob is turned. Install the VOLUME knob so that the clicking noise can be heard in the position shown below (The VOLUME knob returns to its original position after turning it four times.). If the clicking noise can not be heard in the adequate position, confirm the positions of the variable resistor shaft and the knob shaft. (Refer to the knob shaft and variable resistor shaft installation shown next.)
3. When the clicking noise is heard in the adequate position, turn the VOLUME knob slightly clockwise to avoid the stopper and push it in.



2-6. KNOB SHAFT AND VARIABLE RESISTOR SHAFT INSTALLATION

The knob and the variable resistor shafts are interlocked by gears and have their own part numbers. Therefore, when replacing the knob shaft or the variable resistor shaft, install them as shown below. If not, the VOLUME scale will not indicate correctly.



2-7. NOTE ON MOTOR INSTALLATION

Install the motor as shown by the arrows in Fig. A. Also install it so that the motor lead comes in the position shown in Fig. B. Then, move the motor in all directions and confirm that the groove of the cushion is fixed in the chassis. If the motor is not installed firmly, the motor will slant, and the belt will come off.

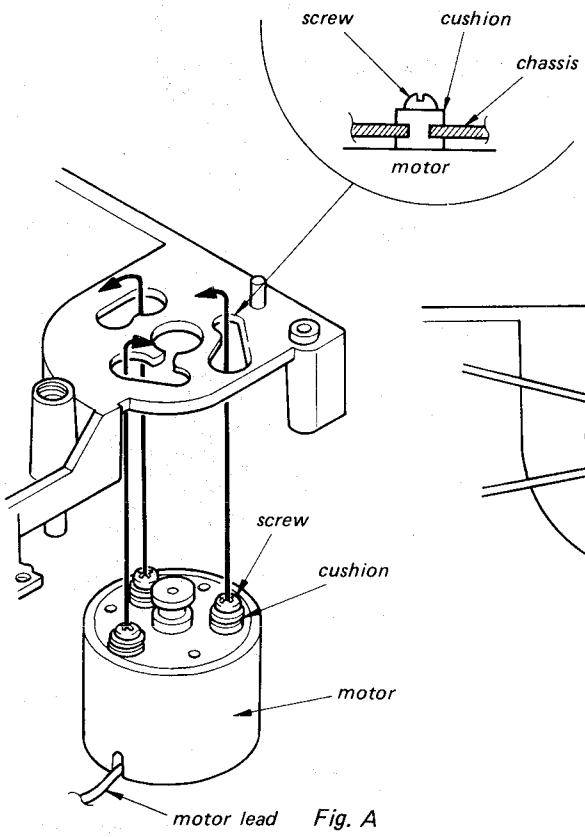


Fig. A

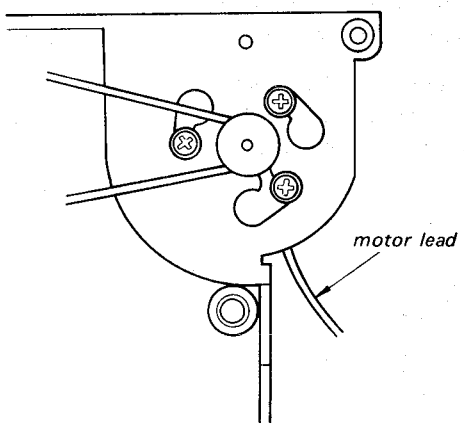
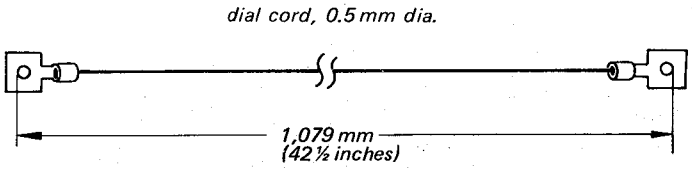


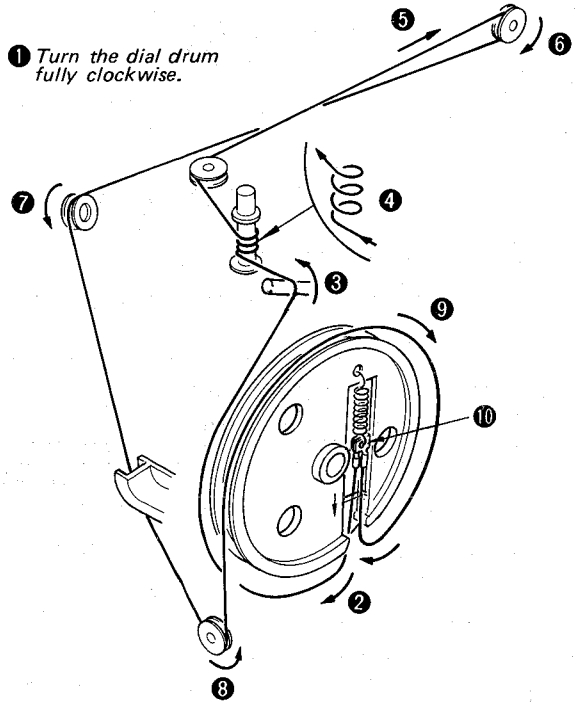
Fig. B

2-8. DIAL CORD STRINGING

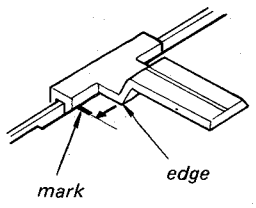
1) Preparation



2) Stringing



3) Dial Pointer Installation



Place the edge on the mark.

SECTION 3
ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured; alcohol-moistened swab:

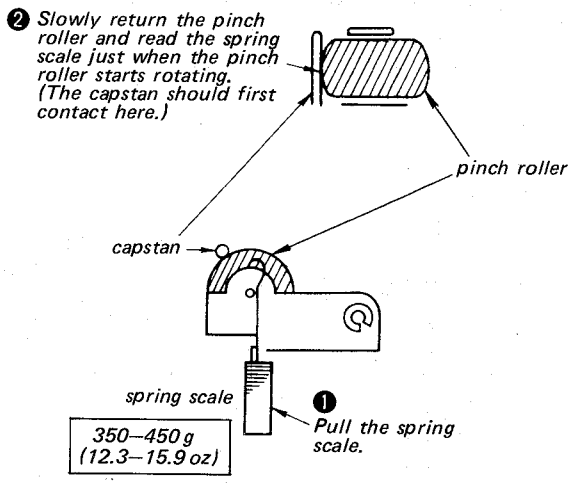
record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

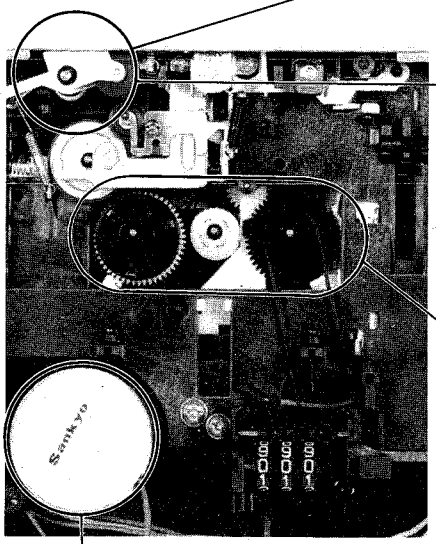
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

3-1. MECHANICAL ADJUSTMENT AND MEASUREMENTS

Pinch Roller Pressure Measurement

– Playback Mode –


❷ Slowly return the pinch roller and read the spring scale just when the pinch roller starts rotating. (The capstan should first contact here.)
pinch roller
capstan
spring scale
❶ Pull the spring scale.
350–450 g (12.3–15.9 oz)



Tape Tension Measurement

Meter	Meter reading
CQ-403	more than 150 g (more than 5.3 oz)

Torque Measurement

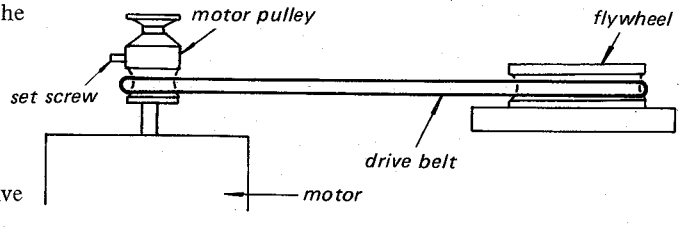
Torque	Torque meter	Meter reading
Forward	CQ-102A	24–50 g·cm (0.33–0.69 oz·inch)
Fast Forward and Rewind	CQ-201A	60–110 g·cm (0.83–1.52 oz·inch)

Motor Pulley Height Adjustment

Perform this adjustment, after replacing the motor pulley or the flywheel.

Procedure:

1. Keep the set horizontal.
2. Adjust the motor pulley height so that the drive belt is straight without a twist.



3-2. ELECTRICAL ADJUSTMENTS – TAPE RECORDER SECTION –

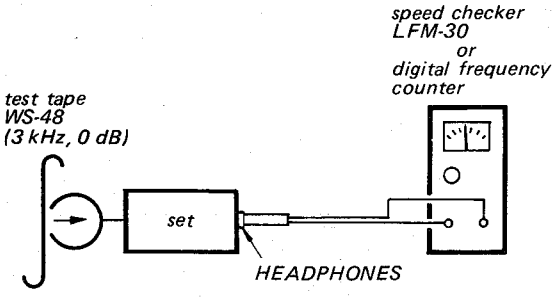
Tape Speed Adjustment

Setting:

VOLUME control: mechanical mid

Procedure:

Mode: playback



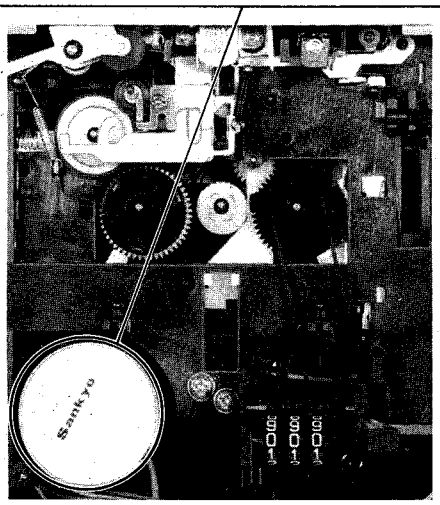
Specification:

Speed checker	Digital frequency counter
±2.5%	2,925–3,075 Hz

If necessary, replace the motor pulley.

Motor pulley Part No.	Mark	Tape speed change
X-3558-615-1	A	-2.5%
X-3558-615-2	B	-1.5%
X-3558-615-3	C	standard
X-3558-615-4	D	+1.5%
X-3558-615-5	E	+2.5%

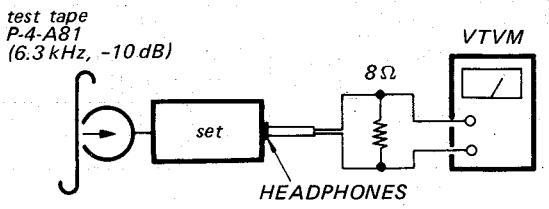
Note: Perform the motor pulley height adjustment.



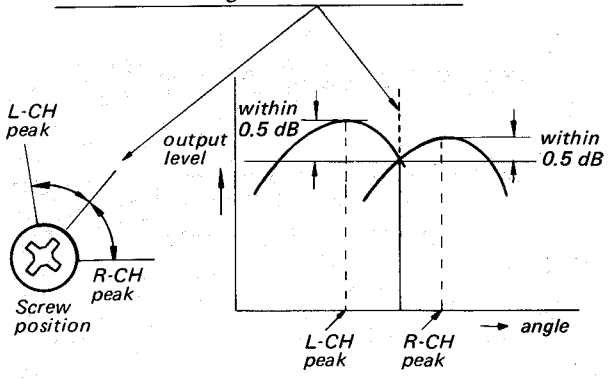
Record/playback Head Azimuth Adjustment

Procedure:

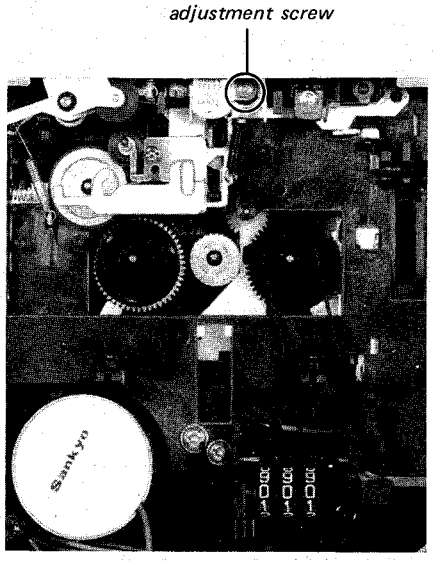
1. Mode: playback



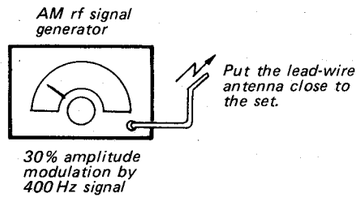
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw where both of output levels match together within 0.5 dB.

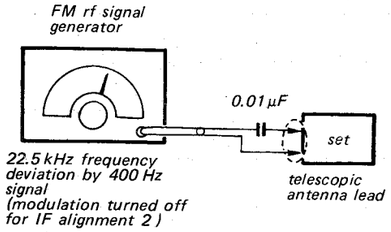


Adjustment Location:



— RADIO SECTION —

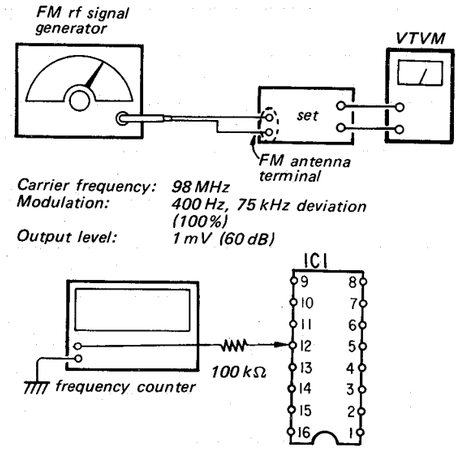



FM rf signal generator
0.01 µF
set
22.5 kHz frequency deviation by 400 Hz signal
(modulation turned off for IF alignment 2)
telescopic antenna lead

19 kHz Adjustment

A) Regular Method

Procedure:

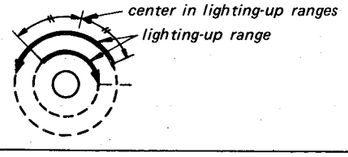


1. Tune the set to 98 MHz.
2. Adjust RV1 for 19 kHz ± 30 Hz on the counter.

B) Simple Method

Procedure:

1. Tune the set to the FM stereo broadcasting signal.
2. Turn RV1 clockwise or counterclockwise and memorize the lighting-up range of the stereo lamp.
3. Secure RV1 at the center of the lighting-up range of both turns as shown below.



SW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VOM ①.	
5.8 MHz	T6
18.4 MHz	CT6

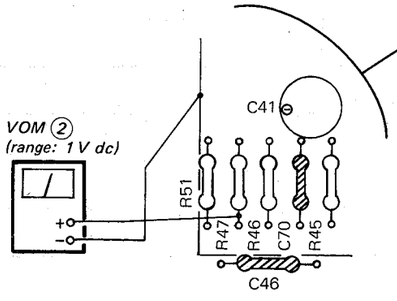
LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VOM ①.	
145 kHz	T7
365 kHz	CT7

MW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VOM ①.	
530 kHz	T8
1,605 kHz	CT8

RV1

IC1

AM IF ALIGNMENT	
Adjust for a maximum reading on VOM ①.	
468 kHz	CFT
	T9

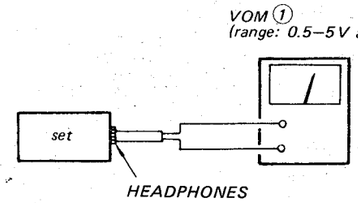


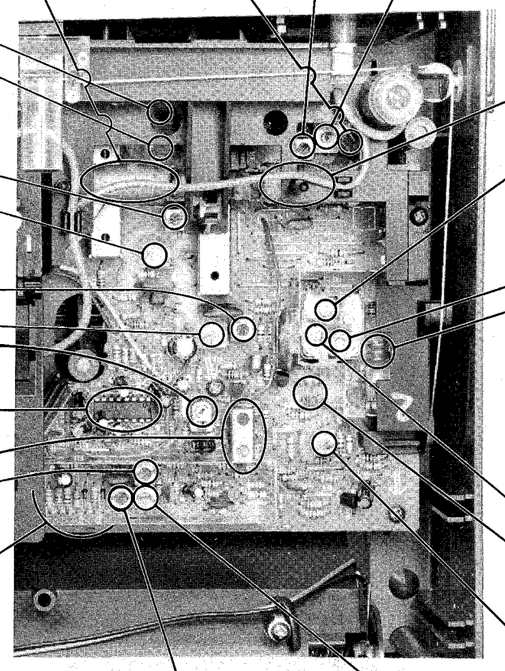
• Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

• Repeat the MW and LW tracking adjustments several times alternately.

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM ①.	
160 kHz	330 kHz
L4	CT4

SW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM ①.	
5.8 MHz	18.4 MHz
T4	CT3





MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM ①.	
L3	620 kHz
CT5	1,400 kHz

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VOM ①.	
CT2	108.5 MHz
L2	87.1 MHz

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM ①.	
CT1	108.5 MHz
L1	87.1 MHz

T3
Adjust for 0 V reading on VOM ②.
FM IF ALIGNMENT 2 (10.7 MHz with no modulation)

T2	T1
Adjust for a maximum reading on VOM ①.	
FM IF ALIGNMENT 1 (10.7 MHz with modulation)	

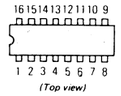
SECTION 4
DIAGRAMS

4-1. MOUNTING DIAGRAM — *Conductor Side* —

Replacement Semiconductors

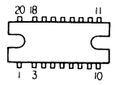
For replacement, use semiconductors except in ( ).

IC1: LA3361

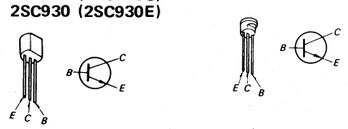


IC301: BA328

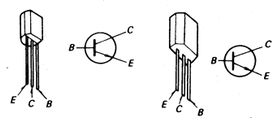
IC302: LA4125



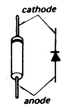
Q1, 3, 5, 8: 2SC930 (2SC930D) **Q2: 2SC668 (2SC668D)**
Q4, 7: 2SC930 (2SC930C)
Q6: 2SC930 (2SC930E)



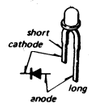
Q101, 102
Q201, 202 : 2SC1364 (2SC1634)
Q301



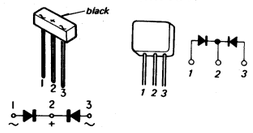
D1: 1S2687S-1 (SD113)
D2, 3: 1S1555
D4, 501, 502 : 1T261
D601, 602
D5, 301: RD5.6EB2Z (RD5.6EB)



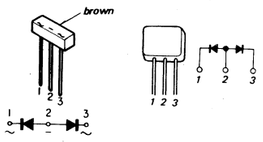
D901, 902: TLR124

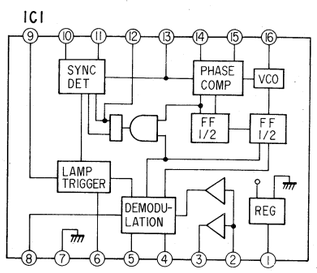


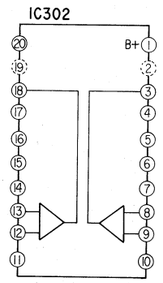
D802: S3VC40 (MI151)

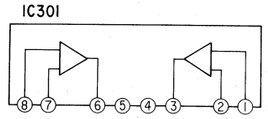


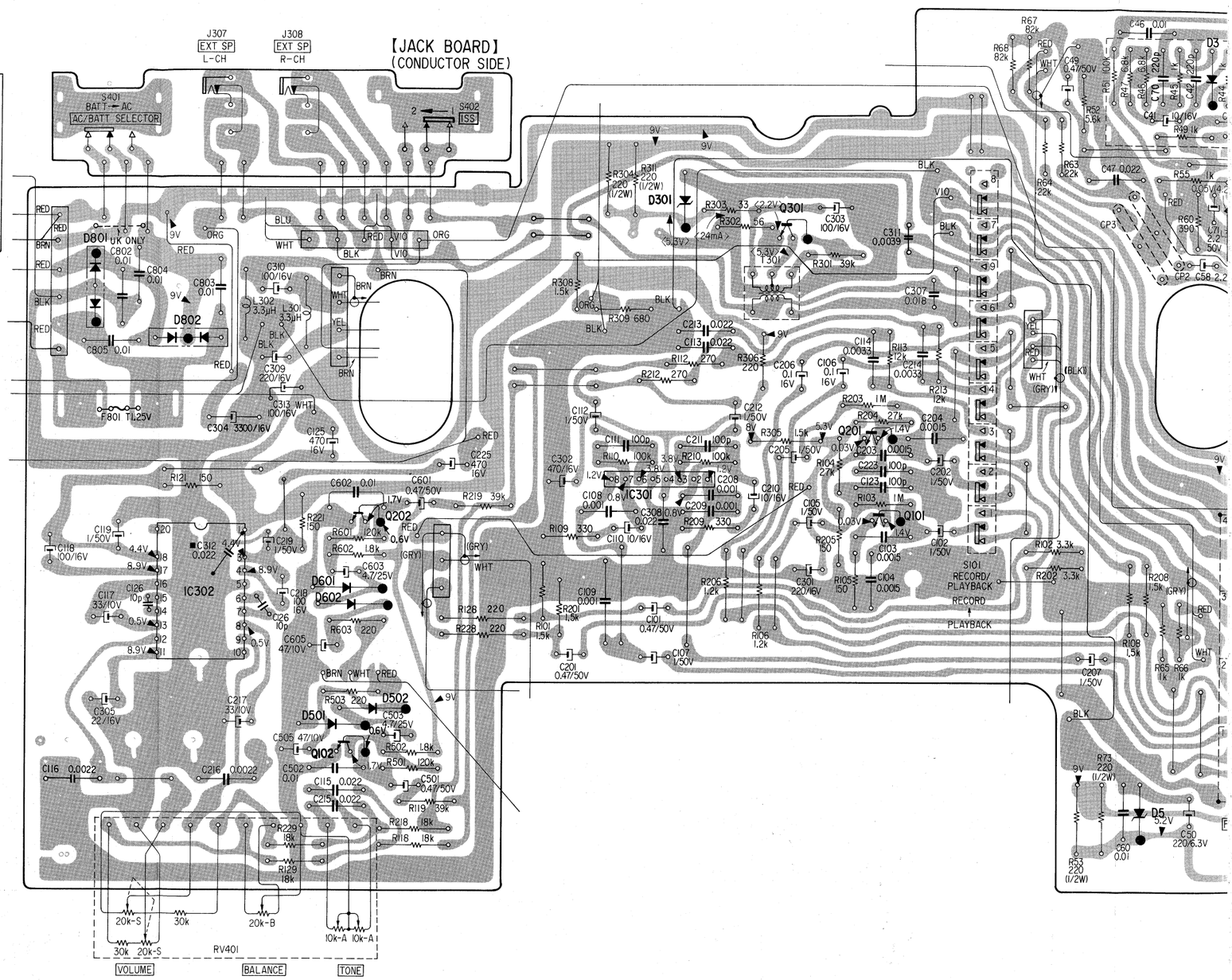
D801: S3VC40R (MI151R)





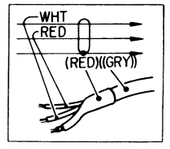






Note:

- ■ : part mounted on the conductor side.
- [ ]← : indicates side identified with part number.
- ▒▒ : B+ pattern
- Readings are taken in FM mode with a VOM (20 kΩ/V).
  〈 〉: RECORD
  ( ): AM
- Color code of sleeving over the end of the jacket.



| Q
·
IC | | |

CFS-55L

【JACK BOARD】
(CONDUCTOR SIDE)

J307 EXT SP L-CH
J308 EXT SP R-CH
S401 BATT ← AC AC/BATT SELECTOR
S402 ISS
D801 UK ONLY
D802
D301
D601
D602
D501
D502
Q102
IC302
IC301
Q301
Q202
Q201
Q101
RV401 VOLUME BALANCE TONE
20k-S 30k 20k-B 10k-A 10k-A 30k 20k-S
S101 RECORD/PLAYBACK
RECORD
PLAYBACK
D1 D2 D3 D4 D5
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8
IC1
S201 FUNCTION SLEEP RADIO TAPE
S1 BAND SELECT FM MW LW SW
CP2,3
600p
1.2k 2.4k 1.2k
5000p 5000p
【MAIN BOARD】(CONDUCTOR SIDE)

| | | |

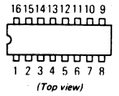
4-2. MOUNTING DIAGRAM

– Component Side –

Replacement Semiconductors

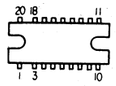
For replacement, use semiconductors except in ( ).

IC1: LA3361

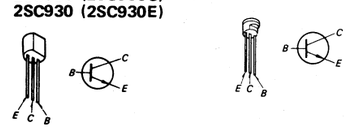


IC301: BA328

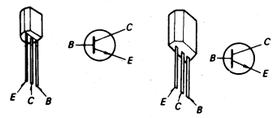
IC302: LA4125



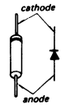
Q1, 3, 5, 8: 2SC930 (2SC930D) **Q2: 2SC668 (2SC668D)**
Q4, 7: 2SC930 (2SC930C)
Q6: 2SC930 (2SC930E)



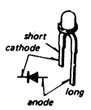
Q101, 102
Q201, 202 : 2SC1364 (2SC1634)
Q301



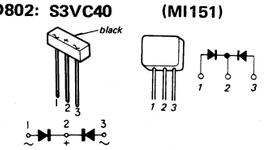
D1: 1S2687S-1 (SD113)
D2, 3: 1S1555
D4, 501, 502 D601, 602 : 1T261
D5, 301: RD5.6EB2Z (RD5.6EB)



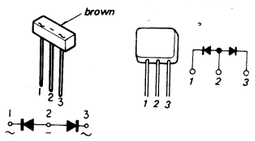
D901, 902: TLR124



D802: S3VC40 (MI151)

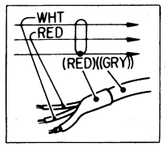


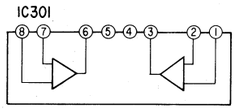
D801: S3VC40R (MI151R)

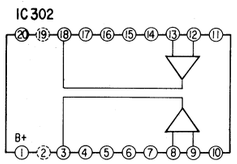


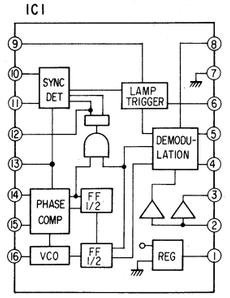
Note:

- [ ]←: indicates side identified with part number.
- ▒▒: B+ pattern
- Signal Path
  - ——→: FM
  - —·—·→: L-CH
  - —··—··→: R-CH
- Readings are taken in FM mode with a VOM (20 kΩ/V).
  < >: RECORD
  ( ): AM
- Color code of sleeving over the end of the jacket.





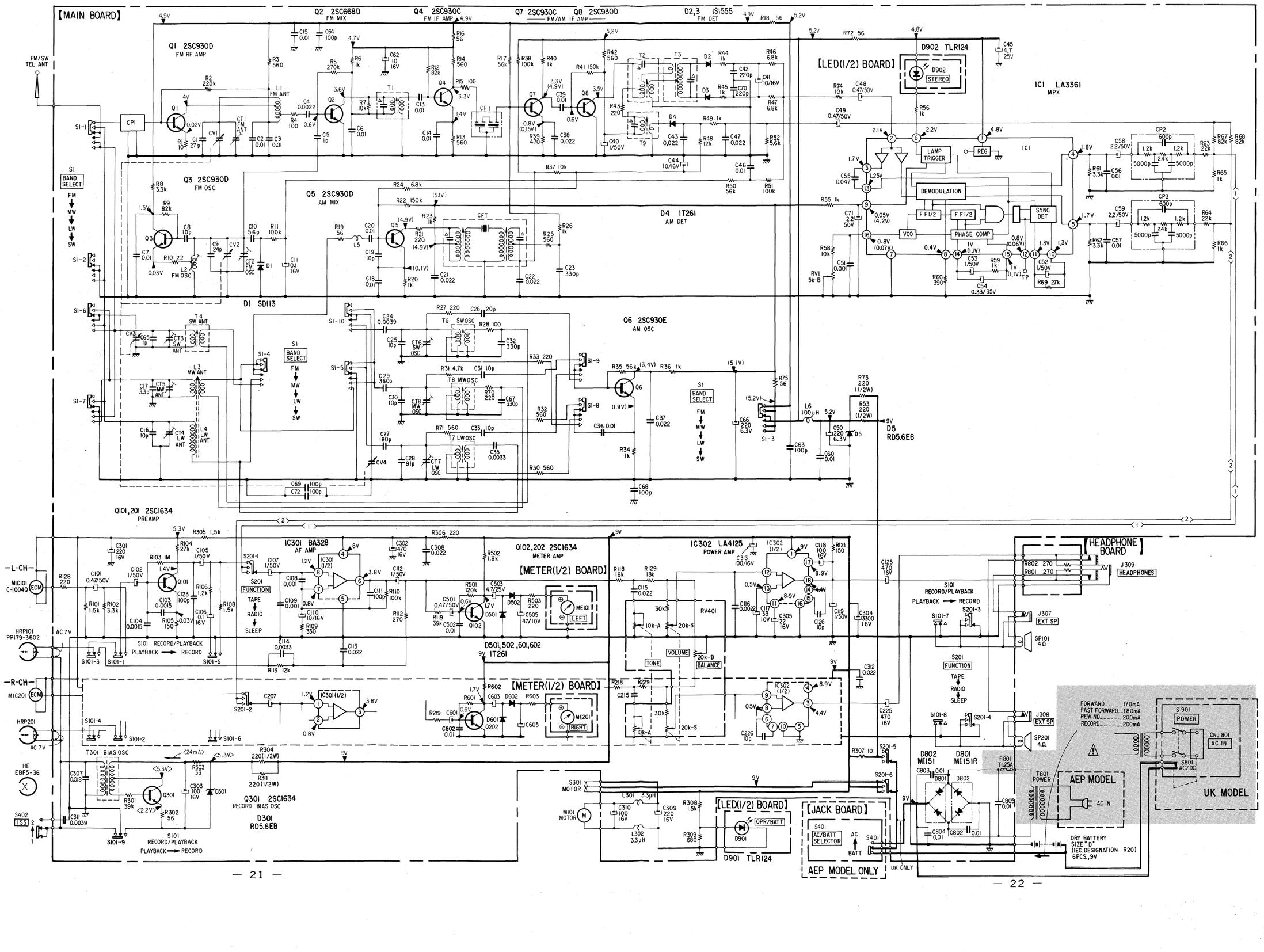


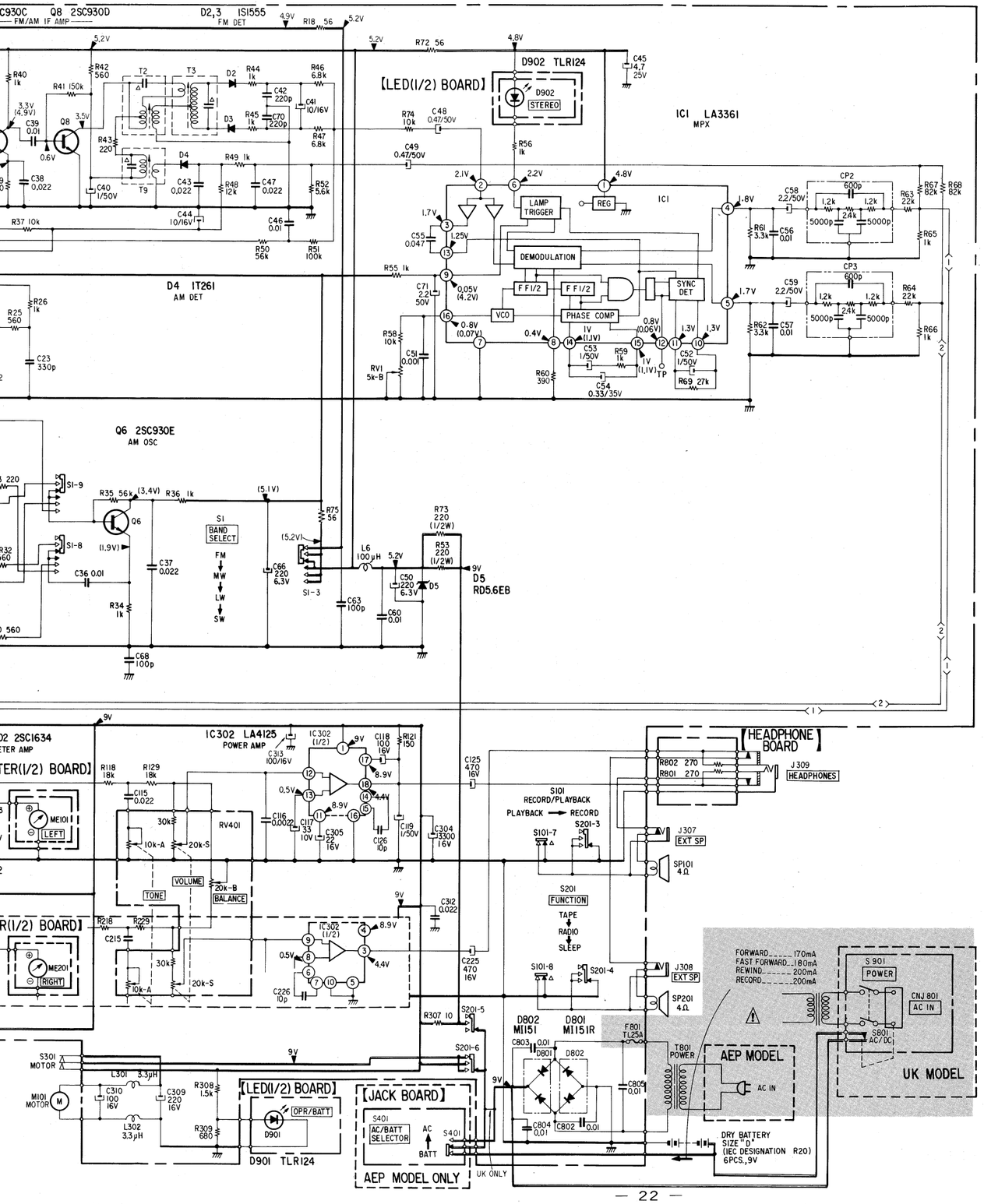


| | | |

| | | |

4-3. SCHEMATIC DIAGRAM





Note:

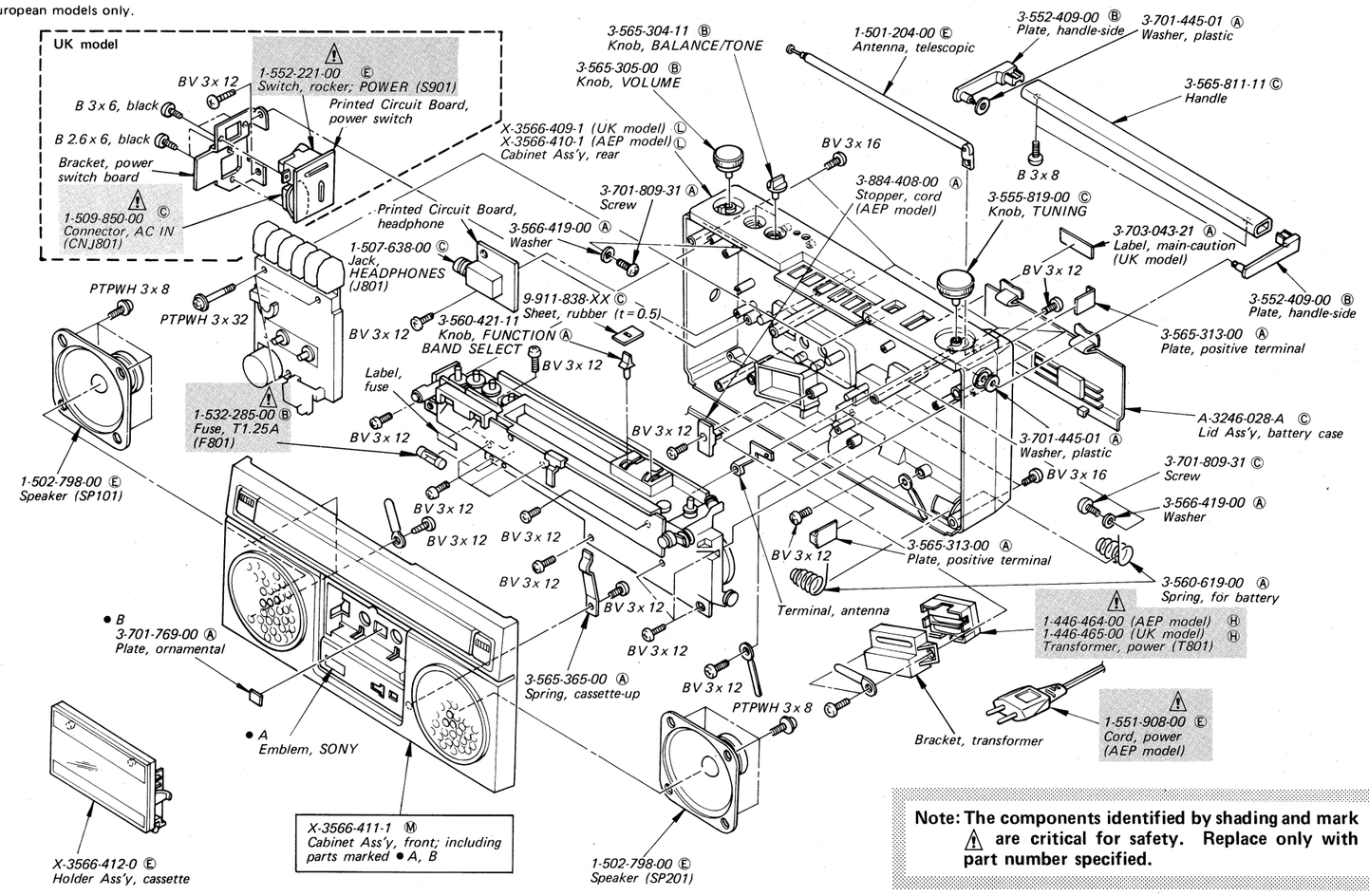
- Components for right channel have same values as for left channel. Reference numbers are coded from 201.
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ: 1000Ω; MΩ: 1000kΩ
- △: internal component.
- ——: B+ bus.
- □: panel designation.
- □: adjustment for repair.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken in FM mode with a VOM (20kΩ/V).
  < >: RECORD
  ( ): AM
- AC voltage readings in the bias oscillator circuit are taken with a VTVM.
- Transistor base-emitter voltages are measured on the 2.5V range.
- Total current is measured with no cassette installed.
- Voltage variations may be noted due to normal production tolerances.
- Switch

Ref. No.	Switch	Position
S1	BAND SELECT	FM
S101	RECORD/PLAYBACK	PLAYBACK
S201	FUNCTION	FM
S301	MOTOR	OFF
S401	AC/BATT SELECTOR (AEP model)	BATT
S402	ISS	1
S801	AC/DC (UK model)	ON
S901	POWER (UK model)	OFF

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

(1)

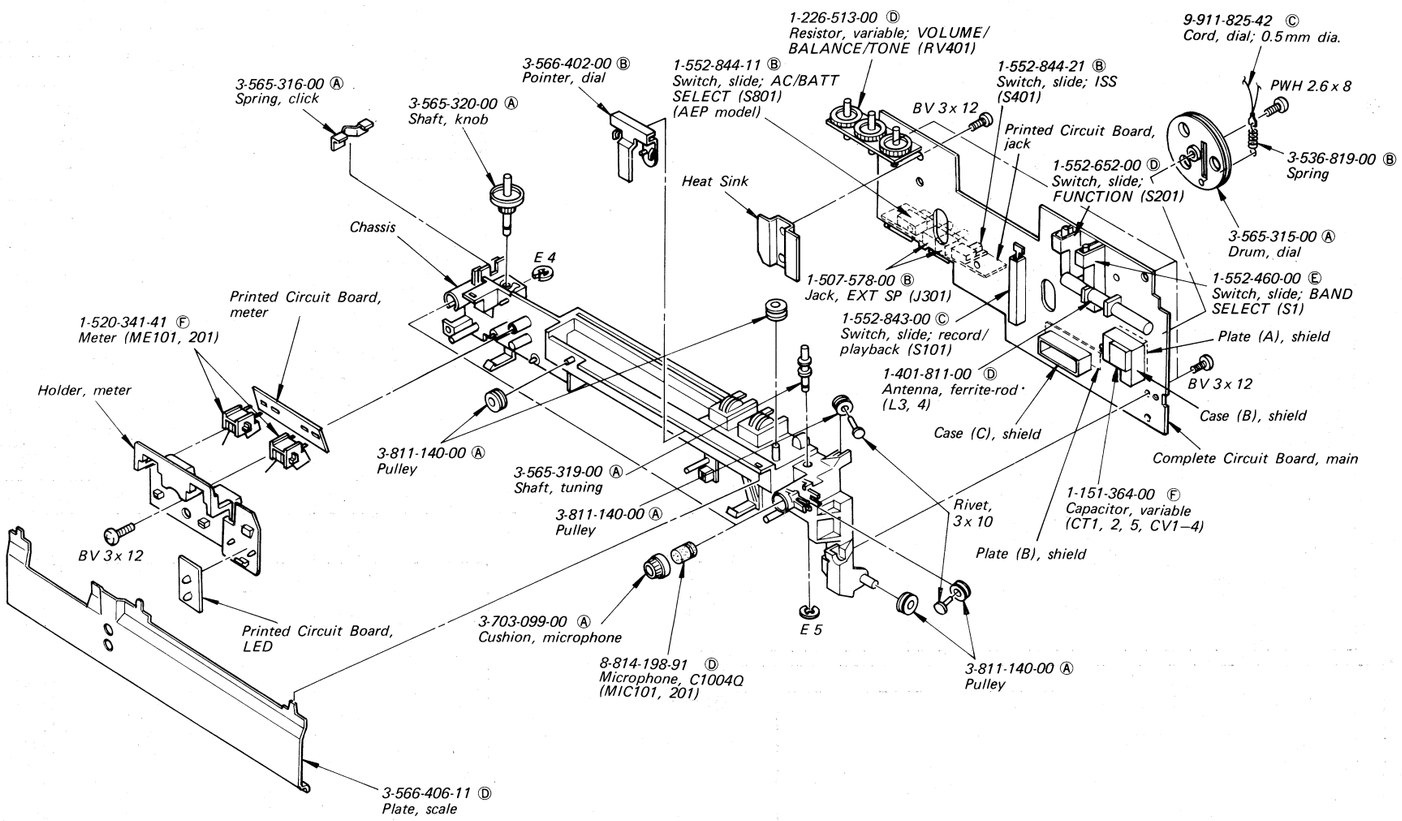
Note:
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.


UK model
1-552-221-00 Ⓔ Switch, rocker; POWER (S901)
BV 3x 12
B 3x 6, black
Printed Circuit Board, power switch
B 2.6x 6, black
Bracket, power switch board
1-509-850-00 Ⓒ Connector, AC IN (CNJ801)
3-565-304-11 Ⓑ Knob, BALANCE/TONE
1-501-204-00 Ⓔ Antenna, telescopic
3-552-409-00 Ⓑ Plate, handle-side
3-701-445-01 Ⓐ Washer, plastic
3-565-305-00 Ⓑ Knob, VOLUME
3-565-811-11 Ⓒ Handle
X-3566-409-1 (UK model) Ⓛ
X-3566-410-1 (AEP model) Ⓛ
Cabinet Ass'y, rear
BV 3x 16
B 3x 8
3-701-809-31 Ⓐ Screw
3-884-408-00 Ⓐ Stopper, cord (AEP model)
3-555-819-00 Ⓒ Knob, TUNING
Printed Circuit Board, headphone
3-566-419-00 Ⓐ Washer
3-703-043-21 Ⓐ Label, main-caution (UK model)
1-507-638-00 Ⓒ Jack, HEADPHONES (J801)
PTPWH 3x 8
PTPWH 3x 32
9-911-838-XX Ⓒ Sheet, rubber (t = 0.5)
3-560-421-11 Ⓐ Knob, FUNCTION BAND SELECT
3-552-409-00 Ⓑ Plate, handle-side
3-565-313-00 Ⓐ Plate, positive terminal
Label, fuse
1-532-285-00 Ⓑ Fuse, T1.25A (F801)
A-3246-028-A Ⓒ Lid Ass'y, battery case
3-701-445-01 Ⓐ Washer, plastic
3-701-809-31 Ⓒ Screw
3-566-419-00 Ⓐ Washer
1-502-798-00 Ⓔ Speaker (SP101)
3-565-313-00 Ⓐ Plate, positive terminal
3-560-619-00 Ⓐ Spring, for battery
Terminal, antenna
1-446-464-00 (AEP model) Ⓗ
1-446-465-00 (UK model) Ⓗ
Transformer, power (T801)
• B 3-701-769-00 Ⓐ Plate, ornamental
3-565-365-00 Ⓐ Spring, cassette-up
PTPWH 3x 8
Bracket, transformer
1-551-908-00 Ⓔ Cord, power (AEP model)
• A Emblem, SONY
X-3566-411-1 Ⓜ Cabinet Ass'y, front; including parts marked • A, B
X-3566-412-0 Ⓔ Holder Ass'y, cassette
1-502-798-00 Ⓔ Speaker (SP201)

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

(2)

Note:
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.


1-226-513-00 Ⓓ Resistor, variable; VOLUME/ BALANCE/TONE (RV401)
9-911-825-42 Ⓒ Cord, dial; 0.5mm dia.
3-566-402-00 Ⓑ Pointer, dial
1-552-844-11 Ⓑ Switch, slide; AC/BATT SELECT (S801) (AEP model)
1-552-844-21 Ⓑ Switch, slide; ISS (S401)
3-565-316-00 Ⓐ Spring, click
3-565-320-00 Ⓐ Shaft, knob
BV 3x 12
PWH 2.6x 8
Printed Circuit Board, jack
3-536-819-00 Ⓑ Spring
1-552-652-00 Ⓓ Switch, slide; FUNCTION (S201)
Heat Sink
Chassis
E 4
3-565-315-00 Ⓐ Drum, dial
1-507-578-00 Ⓑ Jack, EXT SP (J301)
1-552-460-00 Ⓔ Switch, slide; BAND SELECT (S1)
Printed Circuit Board, meter
1-520-341-41 Ⓕ Meter (ME101, 201)
1-552-843-00 Ⓒ Switch, slide; record/ playback (S101)
Plate (A), shield
Holder, meter
1-401-811-00 Ⓓ Antenna, ferrite-rod (L3, 4)
BV 3x 12
Case (B), shield
Case (C), shield
3-811-140-00 Ⓐ Pulley
3-565-319-00 Ⓐ Shaft, tuning
Complete Circuit Board, main
1-151-364-00 Ⓕ Capacitor, variable (CT1, 2, 5, CV1–4)
Rivet, 3x 10
3-811-140-00 Ⓐ Pulley
Plate (B), shield
BV 3x 12
3-703-099-00 Ⓐ Cushion, microphone
E 5
Printed Circuit Board, LED
8-814-198-91 Ⓓ Microphone, C1004Q (MIC101, 201)
3-811-140-00 Ⓐ Pulley
3-566-406-11 Ⓓ Plate, scale

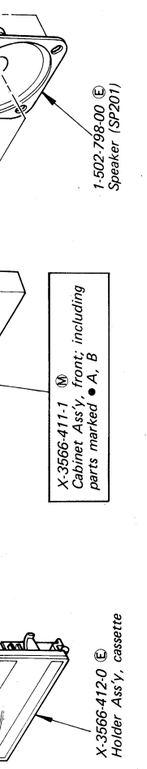
(3)

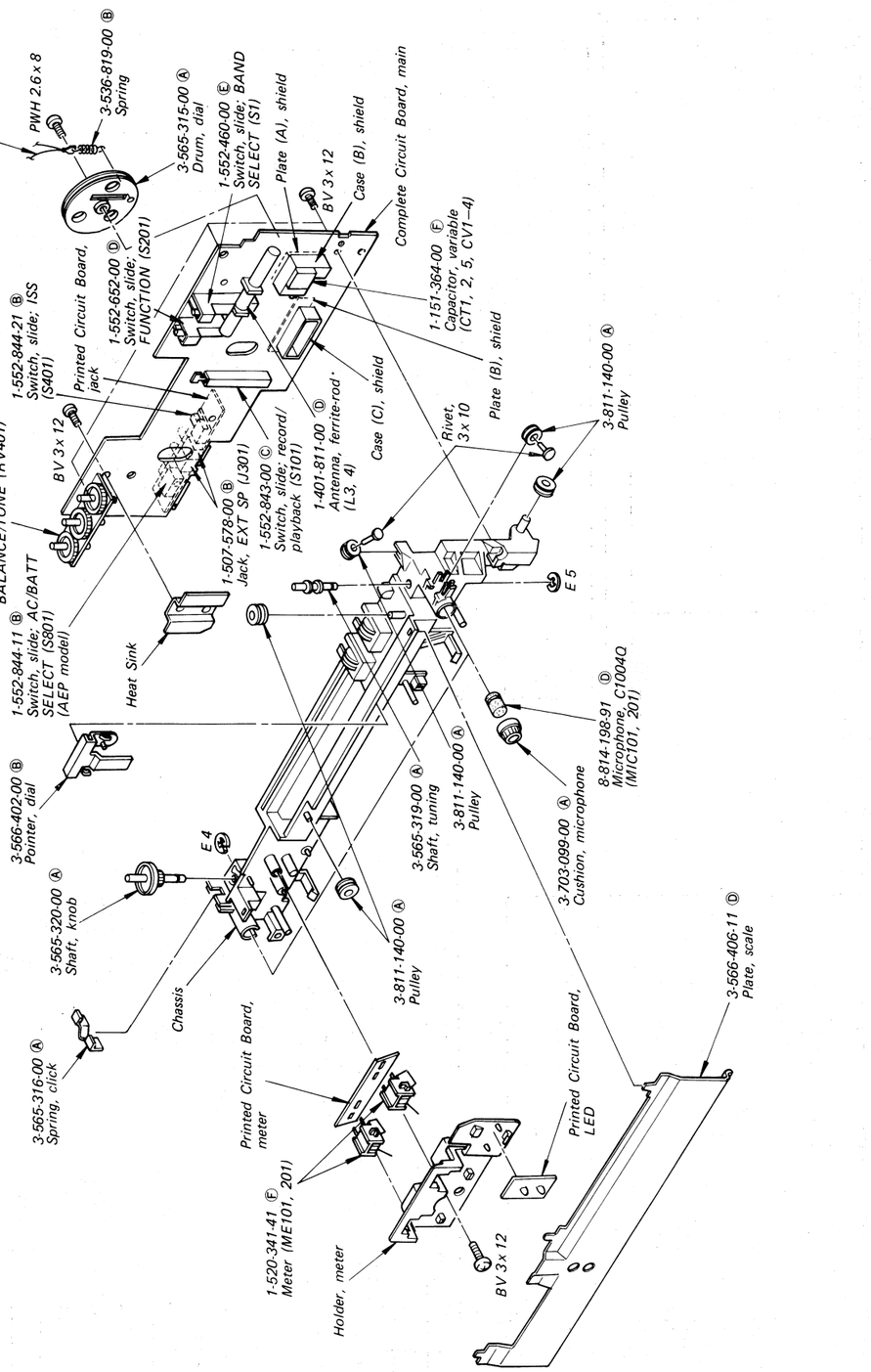
Note:
- Items with
  description
  are seldom r
- All screws a
  unless other
  (–) = slotted
- Circled letter
  European mo

CFS-55L

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

(2)

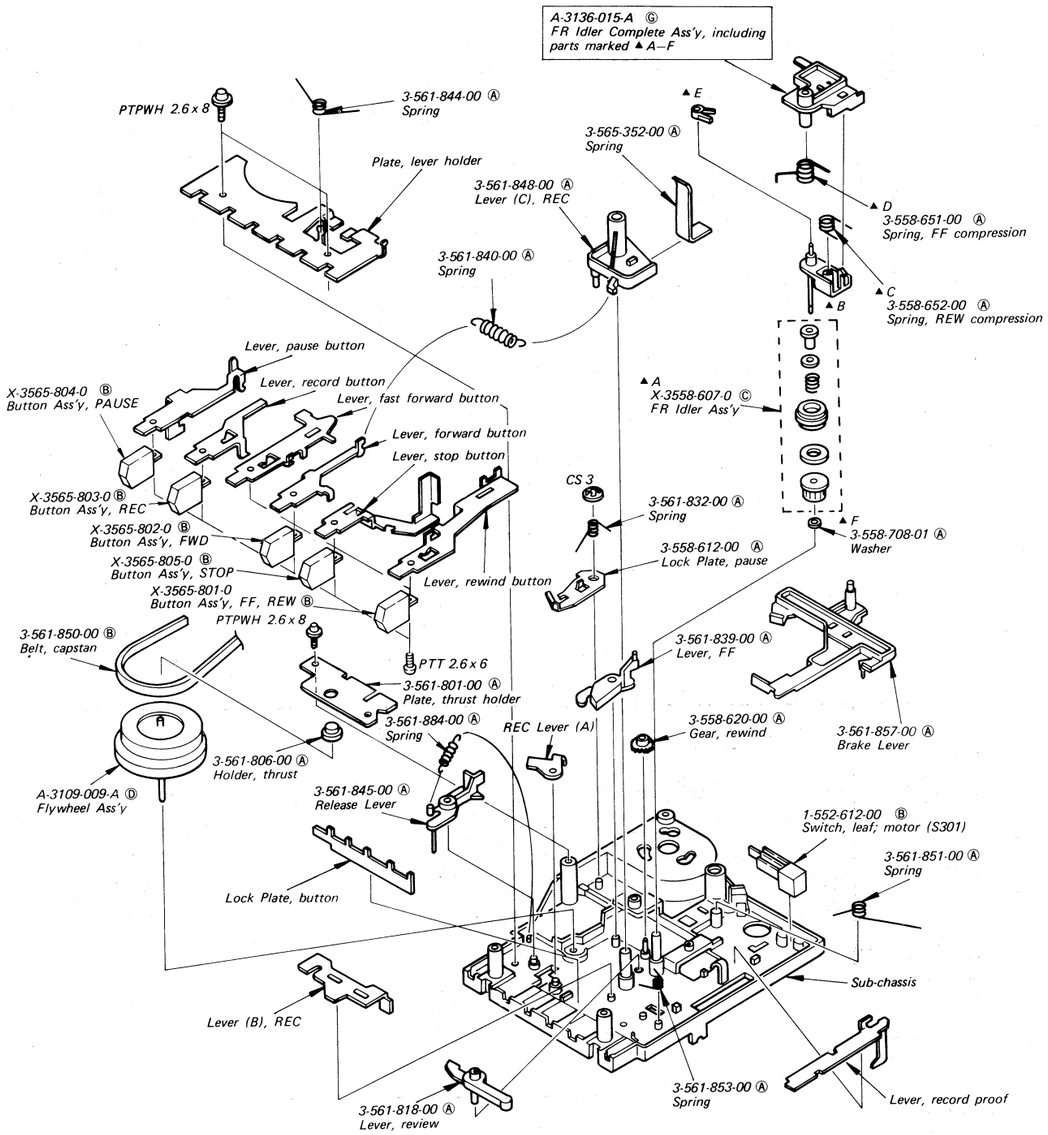




Note:
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

(3)

Note:
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.



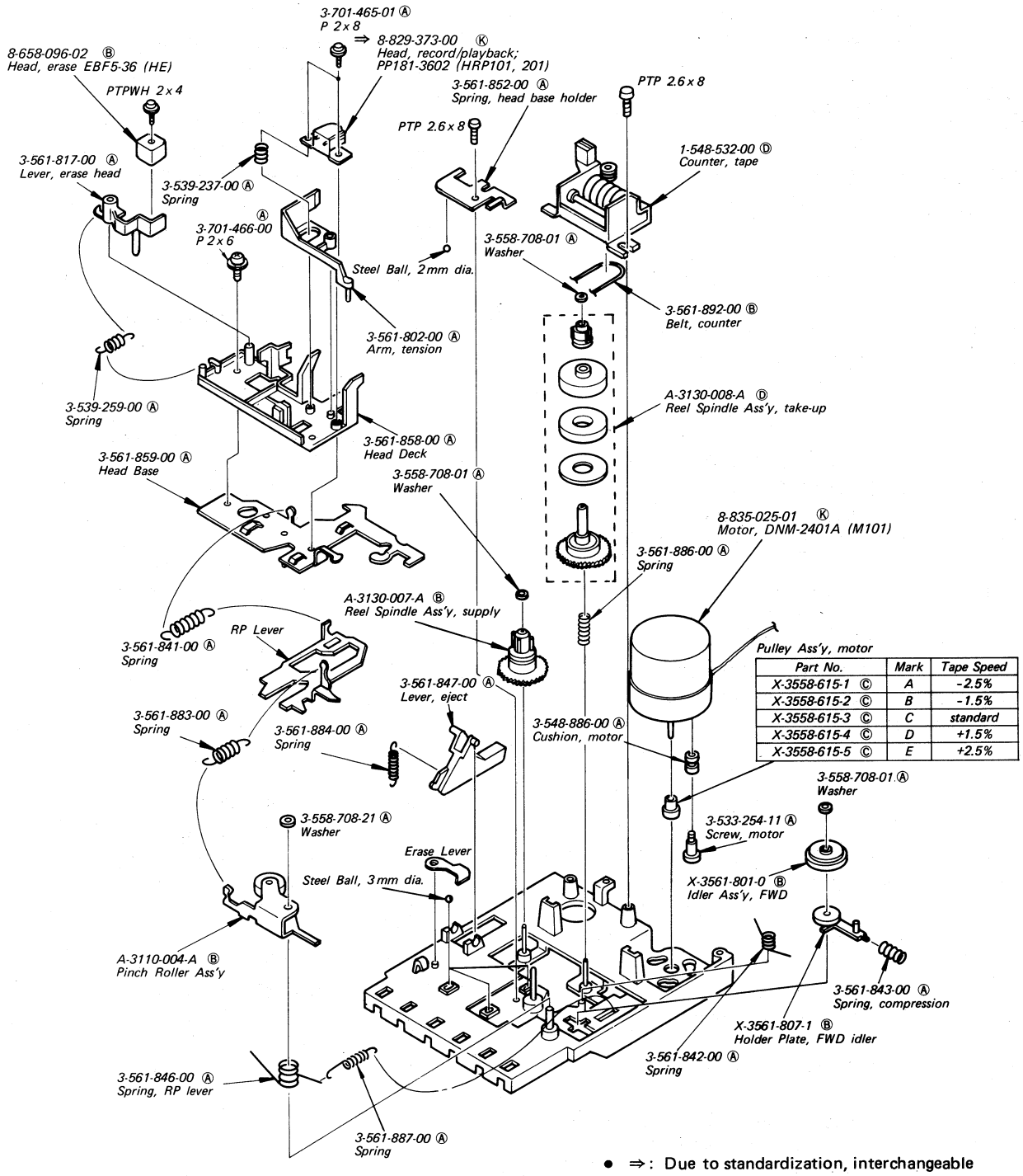
A B C D

1 2 3 4 5

(4)

Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.



Part No.	Mark	Tape Speed
X-3558-615-1 Ⓒ	A	-2.5%
X-3558-615-2 Ⓒ	B	-1.5%
X-3558-615-3 Ⓒ	C	standard
X-3558-615-4 Ⓒ	D	+1.5%
X-3558-615-5 Ⓒ	E	+2.5%

- ⇒: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

SECTION 6
ELECTRICAL PARTS LIST

Note: Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

Ref. No.	*Part No.*	*Description*
		SEMICONDUCTORS
		Transistors
⇒Q1	8-729-803-04	Ⓑ 2SC930
⇒Q2	8-729-806-84	Ⓑ 2SC668
⇒Q3–8	8-729-803-04	Ⓑ 2SC930
⇒Q101,201 ⇒Q102,202	8-729-663-47	Ⓒ 2SC1364
⇒Q301	8-729-663-47	Ⓒ 2SC1364
		ICs
IC1	8-759-833-61	Ⓔ LA3361
IC301	8-759-932-80	Ⓒ BA328
IC302	8-759-841-25	Ⓕ LA4125
		Diodes
⇒D1	8-719-768-71	Ⓑ 1S2687S-1
D2,3	8-719-815-55	Ⓑ 1S1555
D4	8-719-026-11	Ⓐ 1T261
⇒D5	8-719-156-25	Ⓑ RD5.6EB2Z
⇒D301	8-719-156-25	Ⓑ RD5.6EB2Z
D501,502 D602,602	8-719-026-11	Ⓐ 1T261
⇒D801	8-719-501-34	Ⓒ S3VC40R
⇒D802	8-719-500-34	Ⓒ S3VC40
D901,902	8-719-812-41	Ⓑ TLR124
		COILS
L3,4	1-401-811-00	Ⓓ Antenna, MW/LW Ferrite-rod
L6	1-408-080-00	Ⓐ Microinductor, 100μH
L301,302	1-408-159-00	Ⓑ Microinductor, 3.3μH
		TRANSFORMERS
T1	1-403-872-00	Ⓑ FM IFT
T2	1-403-952-00	Ⓑ FM Discriminator
T3	1-403-953-00	Ⓑ FM Discriminator
T4	1-401-538-00	Ⓑ SW ANT
T6	1-405-745-00	Ⓑ SW OSC
T7	1-405-772-00	Ⓑ LW OSC
T8	1-405-520-00	Ⓑ MW OSC
T9	1-404-041-00	Ⓑ AM IFT
T301	1-433-206-00	Ⓑ Record Bias Osc
T801	⚠ 1-446-464-00	Ⓗ Power (AEP model)
T801	⚠ 1-446-465-00	Ⓗ Power (UK model)
CFT	1-403-827-00	Ⓒ AM IFT
		CAPACITORS

All capacitors are in μF and ceramic unless otherwise noted.
50WV or less are not indicated except for electrolytics. p: μμF, elect: electrolytic

C1	1-102-961-00	Ⓐ 27p	
C2,3	1-101-004-00	Ⓐ 0.01	
C4	1-102-121-00	Ⓐ 0.0022	
C5	1-102-934-00	Ⓐ 1p	
C6,7	1-101-004-00	Ⓐ 0.01	
C8	1-102-508-00	Ⓐ 10p	
C9	1-101-982-00	Ⓐ 24p	
⇒C10	1-102-943-00	Ⓐ 6p	
C11	1-131-451-00	Ⓐ 0.1	16V tantalum
C13–15	1-101-004-00	Ⓐ 0.01	
C16	1-102-947-00	Ⓐ 10p	
⇒C17	1-102-940-00	Ⓐ 3p	
C18	1-101-004-00	Ⓐ 0.01	
C19	1-102-947-00	Ⓐ 10p	
C20	1-101-004-00	Ⓐ 0.01	
C21,22	1-101-005-00	Ⓐ 0.022	
C23	1-102-820-00	Ⓐ 330p	
C24	1-108-569-00	Ⓐ 0.0039	
C25	1-102-253-00	Ⓐ 10p	
C26	1-101-974-00	Ⓐ 20p	

⇒: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

Ref. No.	*Part No.*	*Description*		
C27	1-107-091-00	Ⓐ 180p		
C28	1-102-972-00	Ⓐ 91p		
C29	1-107-231-00	Ⓐ 360p		
C30,31	1-102-947-00	Ⓐ 10p		
C32	1-102-820-00	Ⓐ 330p		
C33	1-102-947-00	Ⓐ 10p		
C35	1-102-123-00	Ⓐ 0.0033		
C36	1-101-004-00	Ⓐ 0.01		
C37,38	1-101-005-00	Ⓐ 0.022		
C39	1-101-004-00	Ⓐ 0.01		
C40	1-123-352-00	Ⓐ 1	50V	elect
C41	1-123-316-00	Ⓐ 10	16V	elect
C42	1-102-110-00	Ⓐ 220p		
C43	1-101-005-00	Ⓐ 0.022		
C44	1-123-316-00	Ⓐ 10	16V	elect
C45	1-123-328-00	Ⓐ 4.7	25V	elect
C46	1-101-004-00	Ⓐ 0.01		
C47	1-101-005-00	Ⓐ 0.022		
C48,49	1-123-351-00	Ⓐ 0.47	50V	elect
C50	1-123-296-00	Ⓐ 220	6.3V	elect
C51	1-130-018-00	Ⓑ 0.001		film
C52,53	1-123-352-00	Ⓐ 1	50V	elect
C54	1-131-344-00	Ⓑ 0.33	35V	tantalum
C55	1-161-021-00	Ⓑ 0.047		(semiconductor)
C56,57	1-101-004-00	Ⓐ 0.01		
C58,59	1-123-353-00	Ⓐ 2.2	50V	elect
C60	1-101-004-00	Ⓐ 0.01		
C62	1-123-316-00	Ⓐ 10	16V	elect
C63,64	1-102-973-00	Ⓐ 100p		
C65	1-102-934-00	Ⓐ 1p		
C67	1-102-820-00	Ⓐ 330p		
C68,69	1-102-973-00	Ⓐ 100p		
C70	1-102-110-00	Ⓐ 220p		
C71	1-123-353-00	Ⓐ 2.2	50V	elect
C72	1-102-973-00	Ⓐ 100p		
C101,201	1-123-351-00	Ⓐ 0.47	50V	elect
C102,202	1-123-352-00	Ⓐ 1	50V	elect
C103,203 C104,204	1-102-119-00	Ⓐ 0.0015		
C105,205	1-123-352-00	Ⓐ 1	50V	elect
C106,206	1-131-451-00	Ⓐ 0.1	16V	tantalum
C107,207	1-123-352-00	Ⓐ 1	50V	elect
C108,208 C109,209	1-102-074-00	Ⓐ 0.001		
C110,210	1-123-316-00	Ⓐ 10	16V	elect
C111,211	1-102-973-00	Ⓐ 100p		
C112,212	1-123-352-00	Ⓐ 1	50V	elect
C113,213	1-101-005-00	Ⓐ 0.022		
C114,214	1-102-123-00	Ⓐ 0.0033		
C115,215	1-101-005-00	Ⓐ 0.022		
C116,216	1-102-121-00	Ⓐ 0.0022		
C117,217	1-123-305-00	Ⓐ 33	10V	elect
C118,218	1-123-320-00	Ⓐ 100	16V	elect
C119,219	1-123-352-00	Ⓐ 1	50V	elect
C123,223	1-102-973-00	Ⓐ 100p		
C125,225	1-123-323-00	Ⓑ 470	16V	elect
C126,226	1-102-947-00	Ⓐ 10p		
C301	1-123-321-00	Ⓑ 220	16V	elect
C302	1-123-323-00	Ⓑ 470	16V	elect
C303	1-123-320-00	Ⓐ 100	16V	elect
C304	1-123-326-00	Ⓒ 3300	16V	elect
C305	1-123-317-00	Ⓐ 22	16V	elect
C307	1-108-807-00	Ⓐ 0.018		mylar
C308	1-101-005-00	Ⓐ 0.022		
C309	1-123-321-00	Ⓑ 220	16V	elect
C310	1-123-320-00	Ⓐ 100	16V	elect
C311	1-108-569-00	Ⓑ 0.0039		
C312	1-101-005-00	Ⓐ 0.022		
C313	1-123-320-00	Ⓐ 100	16V	elect
C501,601	1-123-351-00	Ⓐ 0.47	50V	elect
C502,602	1-101-004-00	Ⓐ 0.01		
C503,603	1-123-328-00	Ⓐ 4.7	25V	elect
C505,605	1-123-306-00	Ⓑ 47	10V	elect
C802–805	1-101-004-00	Ⓐ 0.01		
CT3,6,8	1-141-179-12	Ⓑ Trimmer		
CT4,7	1-141-171-00	Ⓑ Trimmer		
CT1,2,5 CV1–4	1-151-364-00	Ⓕ Variable		

Note: Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

Ref. No.	*Part No.*	*Description*
		RESISTORS
		All resistors are in ohms. Common ¼W carbon resistors are omitted. Refer to the list on page 31 for their part numbers.
R53,73	1-202-557-00	Ⓐ 220 ½W
R304,311	1-202-557-00	Ⓐ 220 ½W
R801,802	1-246-459-00	Ⓐ 270
RV1	1-226-235-00	Ⓐ 5 k-B, variable; 19 kHz
RV401	1-226-513-00	Ⓓ variable; VOLUME/TONE/ BALANCE
		SWITCHES
S1	1-552-460-00	Ⓔ Slide, BAND SELECT
S101	1-552-843-00	Ⓒ Slide, record/playback
S201	1-552-652-00	Ⓓ Slide, FUNCTION
S301	1-552-612-00	Ⓑ Leaf, motor
S401	1-552-844-11	Ⓑ Slide, AC/BATT SELECTOR (AEP model)
S402	1-552-844-21	Ⓑ Slide, ISS
S901	⚠ 1-552-221-00	Ⓔ Rocker, POWER (UK model)
		MISCELLANEOUS
CF1	1-527-184-XX	Ⓑ Filter (10.7 MHz), ceramic
CNJ801	⚠ 1-509-850-00	Ⓒ Connector, AC IN (UK model)
CP1	1-231-286-00	Ⓑ Filter, band-pass
CP2,3	1-231-224-00	Ⓑ Encapsulated Component
F801	⚠ 1-532-285-00	Ⓑ Fuse (T1.25 A)
J307,308	1-507-578-00	Ⓑ Jack, EXT SP
J309	1-507-638-00	Ⓒ Jack, HEADPHONES
HE	8-658-096-02	Ⓑ Head, erase; EBF5-36
⇒ HRP101,201	8-829-373-00	Ⓚ Head, record/playback; PP181-3602
M101	8-835-025-01	Ⓚ Motor, DNM-2401A
ME101,201	1-520-341-41	Ⓕ Meter
MIC101,201	8-814-198-91	Ⓓ Microphone, C1004Q
SP101,201	1-502-798-00	Ⓔ Speaker
	1-501-204-00	Ⓔ Antenna, telescopic
	⚠ 1-551-908-00	Ⓔ Cord, power (AEP model)

⇒: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

ACCESSORIES & PACKING MATERIALS

Part No.	*Description*
⚠ 1-551-218-00	Ⓔ Cord (DK-50), power (UK model)
3-565-234-00	Ⓑ Bag, plastic protection
3-565-235-00	Ⓑ Cushion, right
3-565-236-00	Ⓑ Cushion, left
3-566-423-00	Ⓒ Carton
3-701-632-00	Ⓐ Bag, plastic
3-701-684-11	Ⓐ Card, power voltage (AEP model)
3-770-853-11	Ⓑ Manual, instruction (AEP model)
3-770-853-41	Ⓒ Manual, instruction (UK model)
3-793-828-11	Ⓐ Card, caution; cassette
3-794-444-01	Ⓐ Tag, caution; AC/BATT (AEP model)

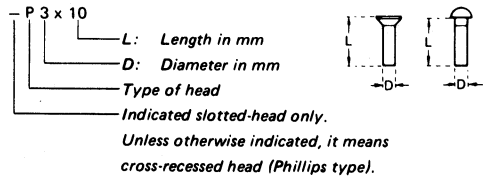
1/4 WATT CARBON RESISTORS Ⓐ

Note: Circled letter Ⓐ is applicable to European models only.

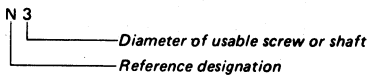
Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-576-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-577-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-578-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-579-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-580-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-581-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-582-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-583-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-584-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-585-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-586-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-587-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

HARDWARE NOMENCLATURE

Screw:



Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		braizer-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	